Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

July 31, 2008

L-2008-172
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Re: St. Lucie Unit 2
Docket No. 50-389
Reportable Event: 2008-003
Date of Event: June 7, 2008
Unit 2 Condensate Pump Failure Resulting in Manual Reactor Trip

The attached Licensee Event Report 2008-003 is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,

Gordon L. Johnston
Site Vice President
St. Lucie Plant

GLJ/dlc

Attachment

IE22
NRR

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
St. Lucie Unit 2	05000389	1 OF 3

4. TITLE

Unit 2 Condensate Pump Failure Resulting in Manual Reactor Trip

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
06	07	2008	2008	- 003	- 00	07	31	2008	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE

1

10. POWER LEVEL

100%

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☒ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
Donald L. Cecchett - Licensing Engineer	772-467-7155

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	SJ	MO	N/A	YES					

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On June 7, 2008, St. Lucie Unit 2 was operating normally in Mode 1 at 100% power when operators observed that the 2B condensate pump and 2B steam generator feedwater pump had tripped and steam generator water levels were rapidly decreasing. Operators took action to manually trip the Unit in accordance with plant procedures. An investigation determined the 2B condensate pump "B" phase motor leads had overheated and failed due to high resistance at the lug crimp connections. All safe shutdown equipment operated as designed and there was no adverse impact on the health and safety of the public.

The root cause of the event was determined to be undetected epoxy resin in the motor lead cables resulting from not having specific hold points to detect epoxy resin in the motor rewind specification during the a vendor vacuum pressure impregnation process. Contributing causes included not understanding the adverse effects epoxy contamination could have on connections and the lack of controls for contamination in the controlling specifications. Corrective actions included revising motor rewind specification (SPEC-E-008) to ensure epoxy is not applied to the motor leads during the Vendor's vacuum pressure impregnation process.

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NARRATIVE

Description of the Event

On June 7, 2008, St. Lucie Unit 2 was operating in Mode 1 at 100% power when Operators observed that the 2B Condensate Pump [EII:SD] and 2B Steam Generator Feedwater Pump [EII:SJ] had tripped and steam generator water levels were rapidly decreasing. The plant was manually tripped in accordance with plant procedures. An investigation determined the 2B condensate pump "B" phase motor leads had overheated and failed. All safe shutdown equipment operated as designed and there was no adverse impact on the health and safety of the public.

Cause of the Event

The event investigation determined that the 2B Condensate Pump "B" phase motor lead lugs overheated and melted due to high resistance at the lug crimp connections. The high resistance was caused by undetected epoxy resin in the motor lead cables. The motor lead lugs were installed with undetected epoxy resin in the motor lead cables because a vendor inadvertently impregnated the motor lead cables with epoxy resin during the Vacuum Pressure Impregnation (VPI) process. The root cause for the undetected epoxy resin was the motor rewind specification did not have specific hold points to detect epoxy resin in motor leads.

Several contributing factors were identified including the vendor inadvertently contaminating the motor lead cables with epoxy and site personnel's unawareness of the adverse results of motor leads contaminated during the VPI process.

Analysis of the Event

This event is reportable under 10 CFR 50.73(a)(2)(iv)(A), as any event or condition that resulted in a manual or automatic reactor trip.

Analysis of Safety Significance

The Condensate system is a composite of several subsystems that work in conjunction with one another to supply pre-heated and deaerated high pressure feedwater to the steam generators for steam production. The Condensate System is not Safety Related except for the condensate storage tank (CST) which is the source of water for the auxiliary feedwater system. Failure of the 2B Condensate Pump would have ultimately led to a low steam generator level auto-trip of the Unit. Actions taken by the Operators to manually trip the Unit precluded that action. The Condensate System has no credited safety function and was able to achieve a safe shutdown without impacting the health and safety of the public.

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NARRATIVE

Corrective Actions

The corrective actions and supporting actions are entered into the site corrective action program. Any changes to the proposed actions will be managed under the commitment management change program.

1. Revise motor rewind specification (SPEC-E-008) to ensure epoxy is not applied to the motor leads during the Vendor's vacuum pressure impregnation process.
2. Revise motor rewind specification (SPEC-E-008) to add inspection hold points to inspect for epoxy and other contaminates.

Similar Events

A search of the corrective action database for St. Lucie was performed to identify events related to a condensate pump/reactor trip and none were found. This event is not considered a repeat event.

Failed Components

Condensate Pump Motor; manufacture Allis-Chalmers - Machine Type "ANVOD"